

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 7:01 AM

**Daily Diary Report by Bid Item**

Contract No.: 04-0120F4

Diary #: 1110 Const Calendar Day: 683

Date: 18-Apr-2014 Friday

Inspector Name: Brignano, Bob

Title: Transportation Engineer

Inspection Type:

Shift Hours:

Break:

Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex

Approved Date:

Status: Submit

**04-0120F4  
04-SF-80-13.2/13.9  
Self-Anchored  
Suspension Bridge****Weather****Temperature 7 AM****12 PM****4PM****Precipitation****Condition clear**Working Day ☒ If no, explain:**Diary:**

Dispute

**General Comments**

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

This morning, prior to the start of the normal work shift on site (7am), the last rod under load breaks. The status of the remaining test rig today is as follows this morning:

Rod 13 (2008 Rod, ID S2-A8, Heat MJF-32, Bottom)

Broke at 0.70 Fu after about 65 hours earlier this morning at about 03:39 AM

Note that the duration at 0.70 Fu was extended, as permitted by the test protocol on a case-by-case basis after evaluation of the data. The AE activity was showing potential cracking and crack propagation at the time when the tensioning for the next load step was scheduled. In the interest of safety, we did not proceed with tensioning the rod and locking off the nut to go to the next load step.

The activities on CCO 314 are as follows after the rod broke before the start of the shift.

ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field on TR 13 today by ABF, because of the rod break this morning – remove fracture surface and partial dismantle. There is also work by ABF to modify TR's 1-4 to TR's 14-17.

VGO (Dave Van Dyke) monitored the data remotely (in Oregon) and sent a notice of the TR 13 break early in the morning. VGO (Rob Rutledge) was scheduled to be on site today for the possible tensioning step at TR 13. He arrives on site approximately 0730, and he produces the typical morning reports and then produces special reports for the broken rod while onsite. Because of the break of the last rod, he does some teardown of the instrumentation setup for TR's 12 & 13, packs equipment, takes the eDAQ data logger, and leaves the site late in the morning. He plans to start the drive back to Oregon with the VGO pickup truck today, which may be completed today or extend into tomorrow (Saturday).

Crews at the Pier 7 warehouse area are working an 8-hour shift 0700 through 1530 today. Ironworkers CJ Biskner (foreman) and Kyle Crowley only work part day (approximately 0900 to 1430, minus time periods elsewhere) at the test rigs to remove the second fracture surface from the rod that broke this morning, and then work the remainder of the morning and afternoon on non-CCO 314 operations elsewhere at the Pier 7 warehouse area. Portions of the shift not spent at the CCO 314 test rigs are not covered in this diary. ABF Ironworker Donald Plumb who has worked at the test rigs the last 2 days on the modification of TR's 1-4 to TR's 14-17 is not at work today for a previously scheduled appointment. Laborer Carlos (Pedro) Garcia work all day at the test rigs on CCO 314 for the modification of TR's 1-4 to TR's 14-17.



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While there is no work by ABF to modifying TR's 1-4 to TR's 14-17 with Ironworkers, Laborer Carlos (Pedro) Garcia continues yesterday's work to clean the threads of the used jacking rods from TR's 1-4. He uses a wire brush, wire wheel brush, and MEK. This cleanup is necessary because these rods have varying amounts of rust on them from being stored outside under tarps. Reusing these jacking rods previously used at TR's 1-4 requires MT, which is scheduled for next week on Monday with Smith-Emery. After yesterday's work cleaning about one and a half rods, another one and a half rods are completed by lunch and the fourth rod is completed in the afternoon.

Additionally, 6 previously used 4" diameter 8 TPI nuts are pulled from a box for possible use at TR's 14-17. The nuts are as follows:

1&2: A spare nut from TR's 1-4 and a TR 9 nut that were previously inspected by Smith-Emery for use at TR's 12 & 13 but not used (spares for TR's 12 & 13, which are now complete)

3: A nut from TR 6 – this is the nut against the test rig which only saw locked off loads, not the nut against the jacking beam which saw higher jacking loads.

4: A spare nut from TR's 1-4 that was inspected by Smith-Emery for use at TR's 12 & 13 and was used at the TR 13 jacking beam.

5 & 6: The TR 1 nut and the TR 2 nut – note those rods broke at 0.85Fu and 0.80Fu respectively and were not pulled to failure like TR 3.

Also for TR's 14-17, I pull the gauges that were used with the planned 300-ton jacks that were calibrated together and save them for this next round of testing. The gauges for jacks 1A/1B, 2A/1B, 3A/1B, 4A/1B, and 6C/6D (spare) were with ABF shipping and receiving personnel Anthony Garcia where they were slated for sale (ABF selling extra material and equipment). The master gauge was in the hydraulic equipment storage conex, and I work with ironworker Ricky Damboise for a few minutes to get it from that conex.

This morning, prior to the start of the normal work shift on site (7am), TR 13 broke at 0.70 Fu. After the rod break, several steps are performed by CT-METS (Saied Khan) with my assistance.

I take an NaCl solution sample from the wet chamber about 0600. The sample was later provided to the DJV. Below are the pH results.

TR 13 bottom of wet chamber post fracture:

0-14 pH paper = 5

4.0-7.0 pH paper = 5.5

6.5-10.0 pH paper = <6.5 (out of range)

The preservation steps start about 0600, first on the section of the rod that impacted the sandbags at the south end. The VGO clamp for the reference electrode is removed and the nut is backed off (turn towards stickout end of rod). The moisture in the rod to nut thread interface is documented, both on the rod and in the nut. Then work on the stickout end of the rod stops for while to perform the preservation steps on the fracture surface still in the test rig. First the TR 13 wet chamber has the water removed with a shop vacuum between approximately 0650 and 0655. Then, after 0700, the laborer starts his shift and he vacuums the water from the SWPPP containment at this area. Then the fracture surface preservation steps, per the approved procedure are water rinse, dry, alcohol rinse, dry, and WD-40. This is complete about 0750. Then work goes back to the stickout section of the rod. The sides of the stickout end of the rod are dried, labeled, photographed, and zinc oxide / white rust samples are taken from the rod in the area of the nut engagement. This is complete about 0840. Then the preservation steps on the fracture surface on the stickout end of the rod start. The steps, per the approved procedure are water rinse, dry, alcohol rinse, dry, and WD-40. This is complete about 0900.

Then, ironworkers CJ Biskner (foreman) and Kyle Crowley arrive at TR 13 about 0915 to remove the end



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plate and extract the half of the test rod still inside the test rig. They move the traffic plate above this area out of the way – shift it slightly to the south. They remove the 2x4 for the SWPPP containment out of the way for the end plate unbolting operation. Then they use an air gun to unbolt the end plate. Then, they use come-alongs to pull the rod assembly (test rod, coupler, jacking rod) to the south. The test rod is then unthreaded from the coupler. This portion of the test rod already had the fracture surface preservation steps performed, so the rod is taken to the office for storage. The work by ABF to remove the second half of the test rod is complete about 0950.

After the 10am morning break, the ironworkers return to the CCO 314 site to work on a partial teardown of TR's 12 & 13. They start by moving the 2 tents out of the way (move from the top of the test rigs to the side of the test rigs). They remove the south traffic plate at TR 13 and remove the two north traffic plates at TR 13 before lunch. After lunch, they remove the south traffic plate at TR 12, remove the two north traffic plates at TR 12, remove the two traffic plates at TR 9 (were only there to support the tents – even surface with the TR's 12 & 13 traffic plates for the tent feet to sit), remove some 10' k-rail, and remove the wedged steel plates between k-rail at ends of the test rigs. Note that between 0915 when the ironworkers start work at the TR's and 1430 when the ironworkers stop work at the TR's, they also do other non-CCO 314 work on a part time basis (here and there as needed) not covered by this diary.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is used by the laborer for power tools for prep work on jacking rods. A 40kW generator – MQ Power 40 – ABF ID 002051 is on idle/standby at the test rig work area. An oxyacetylene torch is on idle/standby at the test rig work area. A compressor – IR P185 ABF ID 000002 is used at the test rig work area briefly for unbolting the end plate at TR 13. A welding machine – Lincoln Vantage 500 ABF ID 000074 is on idle/standby at the test rig work area. An extendable forklift is brought to the test rig work area to assist with the removal of the end plate from TR 13, and it is also used late for the partial tear down of the test rigs along with a small forklift (CAT). A Kubota Cart is used by the laborer working on the modifications to the test rigs.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:

10' bought k-rail = 20 pieces

10' ABF k-rail = 6 pieces

20' rented k-rail = 10 pieces

20' ABF k-rail = 15 pieces

Note that this includes three 20' ABF k-rail between the CCO 314 work area and FW Spencer's yard, with that k-rail being in place prior to the CCO work and not related to CCO 314. Also a fourth 20' ABF k-rail is between the CCO 314 work area and FW Spencer's yard along the fence line near the BayView Trailer.

The agreed extra work with ABF is as follows:

Engineer Kelvin Chen - 2 hrs

Laborer Carlos (Pedro) Garcia - 8 hrs

Ironworker foreman CJ Biskner - 3 hrs

Ironworker Kyle Crowley - 3 hrs

Extendable Forklift - 1 hr

185 CFM Compressor - 1 hr

7kW Generator - 8 hrs

Kubota Cart - 8 hrs

k-rail: 10 pcs @20' and 4 pcs @10'

Crane Mats (12x12 - 5'x16') - 4 pcs

Crane Mats (12x12 - 5'x7') - 15 pcs

See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:



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Field 2 hours: I am in the field 0500 through 1530. I arrive on site about 0500 to begin the fracture surface preservation steps in the field for the TR 13 rod that broke at about 03:39 AM – I received an automated email notification of the fracture. Beginning the steps as early as possible to avoid contamination/corrosion of the fracture surface was requested. ABF is working in the field from 0700 to 1530. My shift is 0500 to 1530 and my OT hours are 0500 to 0700.